glabrous. Petals oblanceolate, white, ½ longer than the sepals. Pods about 2″ long and 1½″ wide, twisted, oval or obovate, nearly twice as long as the stout, reflexed or widely spreading pedicels, arranged about 1′ apart all along the stem with pedicels turned so that the pods are all on the lower side of the stem, making the raceme appear scorpioid. The stems show a decided tendency to twine, but they seldom make a complete loop.

This unique crucifer, which scarcely seems like a *Draba*, I discovered about fifteen miles south of the California line in Mexico about sixty miles from San Diego, on April 7th, 1882.

I have many specimens of a form of *Clematis ligusticifolia* with perfect flowers. The plant grows along the coast, north of San Francisco.

The Tuckahoe.—In Virginia and in Maryland this name is applied exclusively to that curious subterranean tuber, *Pachyma cocos*. This tuber is found, I believe, in nearly all the Southern States, and as far north as Kent County, Delaware. In Virginia and in Maryland, when large, they are frequently roasted and eaten with salt by the negroes. This use of them they learned from the Indians, in whose "bill of fare" the tuckahoe, so-called, was quite an important element. It grows several feet below the surface of the ground and is met with only by accident, as in clearing up the land and in making ditches in damp places. When first taken from the earth the tubers are soft enough to be cut with a knife. In shape, they vary, some being oblong like a sweet potato, others globose and, with their coarse brown bark, looking like a cocoanut. They also vary in size; I have seen them as large as a man's head. The internal substance is white, has a fungoid odor and a taste that I have found mild and pleasant, although it has been described as acrid.

The tuckahoe is most mysterious in its habits. There is at no time any external indication of its existence beneath the surface of the ground. Hogs are very fond of it, and root it up as they do the truffle. The internal substance contains an abundance of branching filaments; but no fertile form of the plant can be found, though some effort has been made to do so the past two seasons.

Tradition says that the Indians had another mode of preparing it, by drying and pounding as they did corn, then converting it into bread.

Baltimore, Md. MARY E. BANNING.

(By request, we append the following additional notes on a production that has always been a puzzle to botanists, and the origin of which still remains a conjecture.

Tuckahoe occurs from New Jersey southward to the Gulf of Mexico, and westward to Kansas. It is usually found at planting time, when it is turned up by the plow. It often gives no indication of having been attached to anything, although occasionally (especially in the West) it has been found apparently parasitic on the roots of large trees; and, again, detached specimens have been found with a piece of root enclosed in the mass. It was first brought to the notice

of the public by Dr. Clayton, who, under the supposition that it was a fungus belonging to the same order as puff-balls, sent it to Gronovius under the name of *Lycoperdon solidum*, and, as such, described it in the Flora Virginica. This was about one hundred and forty years ago. Next it was described by Schweinitz, in his Synopsis of the Fungi of North Carolina, under the name of *Sclerotium cocos*, and by Fries, in his Systema Mycologicum, under the name of *Pachyma cocos*. At about the time Schweinitz described it, Dr. Macbride, of South Carolina, communicated to the Linnaean Society of London his own observations on the supposed fungus. The late Dr. Torrey, unaware of the fact that he had been anticipated by Schweinitz, described the production, about the year 1819, in the New York Repository, under the name of *Sclerotium giganteum*, and also published the results of a chemical analysis of it. Dr. Torrey ascertained that, while chemical tests failed to detect the presence of starch (which the microscope had also failed to show), the mass consisted almost entirely of a singular substance which he called sclerotine. Braconnot, some years after this, described the same principle (which in some of its modifications is the jelly of fruits) as pectine. Tuckahoe, possessing no cellular structure, no mycelium and no trace of fructification, was long ago removed from among the fungi, and is now considered by the Rev. M. J. Berkeley and other mycologists as a secondary product, caused by the degeneration of the tissues of some flowering plant, in which a change has occurred similar to that which converts animal tissue into adipocere, and in which the cellulose and all other principles are transformed into a body of the pectose group. This, however, is conjecture merely, against the probable truth of which is the fact that no intermediate states have been found, while none, large or small, presents any trace of plant-structure. Owing to the fact that it is sometimes found attached to the roots of trees, especially those of the fir, Currey and Keller consider it to be an altered state of these occasioned by the presence of a fungus, the mycelium of which traverses, disintegrates, and even obliterates the bark. This view seems to be sustained by the analyses of R. T. Brown (1871) and J. L. Keller (1876). The former found it to be composed of water, 14 per cent.; glucose, 0.93 per cent.; gum, 2.63 per cent.; pectose, 64.45 per cent.; cellulose, 17.34 per cent.; ash, 0.16 per cent., and nitrogen only 0.36 per cent. Keller found 77.27 per cent. of pectose; 3.76 per cent. of cellulose; 3.64 per cent. of ash, and other things in about the same proportion as Brown did. Owing to its chemical composition, the tuckahoe is very nutritious, and was from early times used as a food by the Indians, as implied in its common names "Indian bread" and "Indian loaf." It is also said to be employed, boiled in milk, as a substitute for arrowroot in summer complaints, in the Southern States.

A product which is thought to be the same as tuckahoe grows in China, and is sold as food in the streets of Shanghai under the name of füh-ling. An account of this is given by the Rev. M. J. Berkeley in the Proceedings of the Linnaean Society of London.)

Arthrocladia villosa, Duby.—Dr. Farlow records that this rare and interesting alga was first found on the New England coast by